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Pennings, P.J.M.; Keman, J.E.

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Towards a New Methodology of Estimating Party Policy Positions

PAUL PENNINGS and HANS KEMAN
Department of Political Science, Vrije Universiteit, De Boelelaan 1081 c, room U-401, 1081 HV Amsterdam, The Netherlands, E-mail: pennings@scw.vu.nl

Abstract. In the last twenty years, an international group of political scientists has coded nearly 2000 party manifestos with the help of one single coding scheme based on 56 categories which covers all main topics of these documents. However, there is a growing awareness of the shortcomings of the underlying coding scheme, such as overlapping and missing categories, which cannot be repaired without coding all manifestos all over again. Some have presented an alternative for manifesto-research by means of expert opinions on party policy positions, but these are unable to provide reliable time series for subsequent election years. The unborn solution to some of the problems with the coding scheme would be the computerised content analysis on digitalised party manifestos. This would open up a new universe of infinite possibilities for recodings and reanalyses. The extended consequences from full computerisation of textual analysis are mind boggling. But at the present, these possibilities are merely potentials as the computerised techniques are still underdeveloped. This article explores the possibilities for computerised content analysis in such a way that all postwar manifestos in established democracies can be compared with each other with the help of flexible coding schemes.

Key words: coding techniques, computerised content analysis, digitalisation, policy positions, party manifesto research

1. Introduction: Parties and Democracy

The first basic question to be answered is: why bother about party manifestos? Our main motivation is that parties are central actors in an ongoing debate on the quality of democracy. Parties are central because they are the mediators between electors' preferences and public outcomes. Party responsiveness is at the heart of democratic decision-making. It concerns the ways in which political parties translate problems (i.e., situations which cannot be solved by means of societal self-regulation or are considered as a public assignment) into programs and, when in government, translate the programs into public or collective decision-making (Keman, 1997; Pennings, 1998; Strom, 2000). The first step, from problems to programs, concerns mainly the relationship between the preferences of voters and parties. This is the basic theme of the *saliency theory* of party competition (Budge and Farlie, 1983). This theory is based on an inclusive definition of issues, being topics raised by one or more party leaderships and/or important among electors. The saliency theory

assumes that parties try to render selective emphases by devoting most attention to the types of issues that favour themselves and give correspondingly less attention to issues which favour their opponents. Consequently, party competition is only indirectly a confrontation of opposing policies (Budge and Farlie, 1983: 23–24; Budge, 1992, 1993). The saliency theory is based on a critique of Down's model of party competition which assumes that parties are merely vote seekers and only ideologically oriented as far as it enhances their attractiveness to the 'median voter' and thus maximising chances for a majority.

The second step, from programs to policies, concerns the relationship between the preferences (or more specifically: policy positions as a result of preference aggregation) of parties and governments. This theme is at the heart of *the mandate theory* according to which the competing parties offer to the voters different programmes between which they can choose. Thus, the governing parties are expected to carry through the programs on which they have been elected (Budge and Hofferbert, 1990: 111; Klingemann et al., 1994). But, it would be wrong to expect a one-to-one relationship between policy preferences of parties and policy performance of governments. Many factors may interfere with the realisation of policy preferences, such as the fact that many governments are based on coalitions and are confronted with economic and political circumstances and institutional constraints which may frustrate the accomplishment of policy goals, even when all parties agree on them (Cf. Schmidt, 1996; Keman, 1997a).

There are several reasons why we cannot expect a perfect relationship between the preferences of voters, parties and governments. Parties are comprehensive and are concerned with a large variety of societal interests and public problems. Consequently, party manifestos can not simply reflect 'the' priorities of voters. In addition, when parties are part of a coalition, the mandate of parties is always a 'shared mandate', so that public policymaking is not a reflection of the priorities of one single party. This point is made by the recent dissertation of Robert Thompson (1999) in which he compares the degree of pledge fulfilment in the Netherlands (1986–1998) with the United Kingdom. Surprisingly enough, he finds that in the Dutch context 61% of the pledges on socio-economic topics made by parties in government were fulfilled, whereas in the UK this average comes down to 70% (see also: Klingemann et al., 1994: Ch. 14).

Yet, it would be too early too conclude that, given this high degree of pledge fulfilment, the mandate theory is fully applicable to the Netherlands. There are two reasons for this. Firstly, the mandate theory assumes that the party emphases do reflect the priorities of voters. This connection is not empirically examined in Thomson's research. It is simply assumed that voters do recognise party pledges as being relevant to their own concerns. This assumption is questionable since recent empirical research has shown that there is no systematic and close association between the preferences of parties and voters (Pennings, 1998).

Secondly, pledge fulfilment is strongly enhanced by the participation in government, but which parties get into government is not a direct reflection of the outcome

of Dutch elections. Which government is formed depends on a variety of factors of which voter preferences is only factor (Keman, 1996; De Vries, 1999). Hence, the politics of coalition formation influences the extent to which the mandate model can be applied to the Netherlands or to any other consensus democracy. If party pledges are weakly linked to voter preferences and if the participation in government is only indirectly connected to the election results, then the mandate model cannot fully apply, even if *all* party pledges are fulfilled. It should be added that parties do not just seek to please voters but also potential coalition partners, since their preferences are also influenced by inter-party competition and possible co-operation (Budge and Keman, 1990). Pivot parties, being the central and dominant actor, will in that respect take a different position than more marginal opposition parties (Keman, 1997b). In sum: there is a need for more precise indicators of party and policy positions to analyse this crucial link in democratic theory.

Although we cannot expect strong relationships, we do expect some connections between the priorities of voters, parties and governments, because otherwise democratic decision-making would be inconceivable. A central question in the present debate on party policy positions is how they can be measured in terms of relations between voters and parties, between parties themselves and between parties in government (Budge, 2000). This paper gives an overview of the present-day debate and offers some possibilities for significant improvements.

2. Existing Approaches to Estimating Policy Positions

There are many aspects of policy positions which can be measured. As far as these positions are derived from texts, we may distinguish between the selective emphasis on the topics they address and the viewpoints which are taken. The emphasis on a specific topic is usually operationalised as the frequency of this topic: the so-called *issue saliency*. The positive or negative tenor of the viewpoint regarding the issue is labeled as the "*direction* of an issue position".

In the literature on election surveys policy positions of parties are primarily operationalised as directions of issue positions. The party's issue salience is often assessed indirectly. In the literature on party manifestos the Manifesto Research Group is most well known (MRG; later transformed into CMP: Comparative Manifestos Project) (e.g., Budge and Farlie, 1983; Budge, Robertson and Hearl, 1987; Budge and Keman, 1990; Laver and Budge, 1992; Klingemann et al., 1994). This project is based on a coding scheme which was developed in 1979 and has been applied to all 2000 programmes that have been coded by now (see for an overview: Klingemann et al., 1994, 2001). This coding scheme comprises 56 categories which are divided into seven domains (see: Table I). On the basis of frequencies (counts as a proportion of the whole document) percentage scores are obtained and put into the MRG-dataset (Volkens, 1994).

The MRG-approach to analysing political texts can be characterised as *thematic content analysis* rather than as *relational content analysis*, since the frequency of

Table I. The MRG-coding scheme of 56 categories

Domain 1. External Relations	PER410Productivity
PER101Foreign Spec +	PER411Infrastructure
PER102Foreign Spec −	PER412Controlled Economy
PER103Anti-Imperialism	PER413Nationalisation
PER104Military +	PER414Econ Orthodoxy
PER105Military −	PER415Marxist Analysis
PER106Peace	PER416Anti-Growth Economy
PER107Internat +	**Domain 5. Welfare and Quality of life**
PER108European Comm +	PER501Environmental Protection
PER109Internat −	PER502Culture
PER110European Comm −	PER503Social Justice
Domain 2. Freedom and Democracy	PER504Welfare +
PER201Freedom-Human Rights	PER505Welfare −
PER202Democracy	PER506Education +
PER203Constitut +	PER507Education −
PER204Constitut −	**Domain 6. Fabric of society**
Domain 3. Political system	PER601Nat Way Life +
PER301Decentral +	PER602Nat Way Life −
PER302Central +	PER603Trad Moral +
PER303Gov-Admin Efficiency	PER604Trad Moral −
PER304Pol Corruption	PER605Law and Order
PER305Pol Authority	PER606Social Harmony
Domain 4. Economy	PER607Multicult +
PER401Free Enterprise	PER608Multicult −
PER402Incentives	**Domain 7. Social groups**
PER403Market Regulation	PER701Labour +
PER404Econom Planning	PER702Labour −
PER405Corporatism	PER703Agriculture
PER406Protectionism +	PER704Middle Class
PER407Protectionism −	PER705Minority Groups
PER408Economic Goals	PER706Non-economic Groups
PER409Keynesian Demand	

Note: a full description of the variables is available on this adress:
http://www.scw.vu.nl/∼pennings/op/codscheme.doc

issues or themes rather than (the direction of) their relationships with actors/other themes is the focus of research (Roberts, 1997, 2000; Kleinnijenhuis and Pennings, 2000; Popping, 2000). The principal advantage of the relational approach over the thematic approach is that the latter disregards the sentence structure (and thus context). Hence, although the saliency of party priorities can be revealed, it requires strong assumptions about the meaning of the reported frequencies in terms of behaviour towards both electors and governments. Nevertheless, the MRG-project has been a major step forward in developing a positive theory of parties and democracy.

The MRG approach is not completely thematic however, but also slightly relational. The aim is to measure the direction of issue positions with respect to a few selected issues. With regard to thirteen issues (e.g., the military, welfare

state expansion, traditional morality) the direction of an issue position is coded implicitly. Thus, a majority of 2 × 13 categories is actually based on a pro-con-distinction. Coders have to specify whether a sentence on these topics belongs to the set of "positive" remarks, or to the set of "negative" remarks (Volkens, 1994).

In the relational approach to content analysis information on party positions is represented in "party/issue position/issue"-relationships. Both the saliency of specific issues (how many sentences with a given party-issue-dyad) and the direction of issue positions (mean of issue positions in separate sentences on a given party-issue-dyad) can be extracted once texts have been coded relationally (Kleinnijenhuis et al., 1998). Until now this approach has been mainly applied to head lines of newspaper articles and has proven to be reliable (Kleinnijenhuis and De Ridder, 1998). Yet, the relational approach is so time consuming that it is not suited to analyse the full text of a large number of documents.

Next to the distinction between relational and thematic content analysis, there are other methodologies which are used to estimate party policy positions. Three major examples are the expert surveys in which experts are asked to position parties, the positioning of parties on the basis of voter perceptions and the coding of party documents. We will focus here on the latter approach because our proposed new methodology of estimating party policy positions is based on that type of data collection and analysis.

3. Applications of the MRG-Approach

Data on party policy positions may seem a very specific type of data with limited possibilities for applied political research. But the contrary is true, as will be shown in this section. These data have been fruitfully linked to many central variables in modern political research, such as public opinion, median voter positions, party systems, political and socio-economic institutions, government formation and public expenditures. Below we give a few examples of this type of research in order to illustrate that the MRG-codings of party policy positions are not just limited to political parties as such, but are central to the analysis of the democratic process as a whole and party's behaviour in particular. An ongoing methodological debate is linked to these research topics, concerning the way in which categories of different data sources can be matched and also relating to the pitfalls of (pooled) time series analysis. We will not go into these matters here (as they are discussed extensively elsewhere: see Pennings, Keman and Kleinnijenhuis, 1999) and we will focus on the application of computerised content analysis of party manifestos.

3.1. APPLICATION 1: PUBLIC OPINION AND MEDIAN VOTER POSITIONS

The main contradicting views on the linkage between voter positions and party policy positions are those of Downs versus the issue salience theory. In the rational choice view of Downs, parties are vote maximisers and therefore mainly reacting

to voter preferences in order to maximise their vote share (Downs, 1957). The issue saliency theory claims that political parties are mainly ideologically driven (Budge and Farlie, 1983; Budge and Keman, 1990). Consequently, parties are not supposed to be very responsive to sudden shifts in problems and public preferences as such. In stead, most parties are driven by the dominant cleavage in modern democracies: the left-right divide.

Estimates of party policy positions can be used to confront the saliency theory with alternative explanations of party behaviour. In doing so, we can determine to what extent the issue saliency model is the best fitting model. The international NIAS-Research Theme Group on 'The Quality of Democracy' (1995/96) has made a start with this type of comparative empirical research by linking party policy positions to public opinion and policy output variables (see also: Van der Brug, 1997, 1999). In the context of this collective research, four competing models are tested below which are based on different assumptions on the factors which drive party responsiveness. These potential drives are (Pennings, 1998):

1 public opinion, i.e., the popular preferences regarding the direction of public problem-solving;
2 party ideology, i.e., the main ideological orientations of parties which structure their way of perceiving societal problems and public problem-solving;
3 objective problem intensity, i.e., the real world tendencies of problems like inflation and unemployment or, for instance, the eventual effects of demographic change.

The four competing models are used to predict the party emphasis on market (i.e., free enterprise) versus planning (i.e., state intervention):

- The Downsian model ($Y = a + b$ median voter position $+ e$) predicts that parties are neither ideologically driven nor problem oriented. In stead, parties are following voter preferences in order to maximise their votes. Parties are solely responsive to voter preferences.
- The saliency issue model ($Y = a + b$ ideology $+ e$) predicts that parties are ideologically driven. The implication of this is that parties are characterised by ideological rigidity and not directly responsive to voters or problems (Budge and Farlie, 1983).
- The combined model ($Y = a + b$ ideology $+ b$ median voter position $+ e$) predicts that parties will be driven by both left-right ideology and by the central ideological tendency among voters.
- The contextual model ($Y = a + b$ context $+ e$) assumes that party responsiveness is mainly a function of contextual variables which are operationalised as the so-called misery-index: the additive score of unemployment and inflation divided by two.

The results of a regression analysis on pooled time series data indicate that the saliency issue model (predicting that the emphases on market and planning are mainly driven by left'right ideology) is the best fitting model (Adj. $R^2 = 0.31$ for market and 0.20 for planning). Apparently, there appears to be no consistent and

enduring party responsiveness to shifting problem intensities or voter priorities. This does not imply, of course, that parties are not responsive to the public at all. It means that the public priorities only matter in case of particular issues and policy areas in particular periods (like the environmental issue did in the 1980s). These empirical results confirm the central assumption of the saliency theory of issues, namely that parties are strongly driven by ideology.

3.2. APPLICATION 2: POLICY OUTCOMES

Another example of research involves the linkage between party emphases on the one hand and policy outputs and outcomes on the other. Budge and Hofferbert have presented a range of regression equations which model the linkages between party program emphases in several policy domains (human services, defense and foreign policy, physical resources and governance), on the one hand, and expenditures in several policy areas, on the other hand, for the American political parties in the postwar period (Budge and Hofferbert, 1990; Klingemann et al., 1994). The main hypotheses behind these models are presented in Table II (see for a full report: Huberts and Kleinnijenhuis, 1994: Ch. 9).

The models of Budge and Hofferbert can be applied to any policy domain and corresponding program emphases. Their models are also applicable to other political systems. Here we take the example of the Dutch system, but any other multiparty system could have been chosen. We limit the analysis to the three main Dutch parties: the CDA (Christian Democrats), the PvdA (Labour Party) and the VVD (Liberals). As dependent variable we select income inequality which is an important indicator of the effects of socio economic policy-making. Following van Wijck's operationalisation, the degree of income inequality is measured as the proportion of the Old Age Pension (in Dutch: AOW) as a share of the average monthly income (Van Wijck, 1991). The models of Budge and Hofferbert are adjusted to the Dutch multi-party system by assuming that the three parties CDA, PvdA and VVD are the three major parties (either in the role of cabinet party or opposition party). In the competitive model the CDA appears to be the only party that matters. The CDA was present in all post-war cabinets (until 1994). As a consequence, it did not matter much for policy outcomes whether either the PvdA or the VVD joined the CDA-dominated cabinet.

This result indicates that the Christian democratic party CDA plays an important role as a 'pivot party' which is the result of its centre position on the left-right dimension and its dominant parliamentary size. The two dummy variables D65 and D85 represent policy shifts and have much more causal effects in all models than political parties. Whereas the results of Budge and Hofferbert indicate a significant impact of parties on expenditures in most policy domains in the US, our results indicate that the partisan impact on performance (being the *effects* of expenditures and rule giving) is much smaller or even absent in the Dutch situation.

Table II. The mandate models applied to the Netherlands, 1948–1991 ($n = 40$)

Label	Hypothesis	Equation	Result	R2adj.	DW	Interpretation
Competitive model	The sum of all parties' emphases is positive ($_1 + _2 + _3 > 0$)	$Dvt = + {}_1D65_t + {}_2D85_t + {}_3CDAP_t + {}_4VVDP_t + {}_5PVDAP_t + e_t$	Dvt = −0.011 + 0.081 D65t − 0.122 d85t + 0.003 CDAPt + e	0.6	2.9	The CDA-party-beta is the only one that is significant. The other parties do not matter.
Complementary model	The total positive emphases of all parties leads to less income inequality ($_3 > 0$)	$Dvt = + {}_1D65_t + {}_2D85_t + {}_3tot_t + e_t$	Dvt = −0.008 + −0.081.D65t + − 0.111$D85_t$ + 0.001TOT_t	0.6	2.8	Both governmental and opposition favored income equality
Consensus model	Only when there is a consensus between government and opposition we expect an increase in income equality ($_3 > 0$)	$Dvt = + {}_1D65_t + {}_2D85_t + {}_3con_t + e_t$	Dvt = −0.005 + 0.081 D65t + −0.115 D85t + 0.00002 CONt + e	0.6	2.8	The degree of consensus is very moderate
Control model	Only parties in government matter	$Dvt = + {}_1D65_t + {}_2D85_t + {}_3gvt_t + e_t$	Dvt = −0.003 + 0.086 D65 + −0 0.111 D85 + 0.002 gvt + e	0.6	2.9	Only the ideology of the government has a significant Beta score
General program model	The objectives of government and opposition parties are opposed	$Dvt = + {}_1D65_t + {}_2D85_t + {}_3gvt_t + {}_4opp_t + e_t$	Idem	0.6	2.9	Idem

Explanation: Dvt = the degree of income inequality; TOT_t = Sum of positive and negative emphases of the parties in year t; CON = the multiplification of the party emphases, GVT = positive minus negative emphases of the government; OPP = same for opposition parties.
Source: Pennings et al., 1999.

3.3. APPLICATION 3: GOVERNMENT FORMATION

This example links party emphases to government formation. One central assumption in modern theories on government formation is that parties will cooperate which are connected (De Vries, 1999; Van Roozendaal, 1997) and that strong parties will dominate the formation process (Laver and Shepsle, 1996). Once crucial test for the usefulness and applicability of the party policy estimations of the MRG-project is whether they can be used to explain the formation of the 'purple cabinet' in 1994 when the CDA was confronted with a major electoral defeat (Kleinnijenhuis et al., 1995). In order to understand the situation in 1994, parties have to be placed into a multi-dimensional policy space. It is assumed that at least two dimensions structure the party competition: the left-right cleavage and the conservatism-liberalism dimension.

The first dimension is operationalised by means of the left-right scale which has been constructed by Pennings and Keman (1994) (see: Table III). This Left-Right scale is constructed as follows. The Pearson correlation coefficients between the left-right scores of parties on the 10-point expert-scale of Castles and Mair (1984) and the means of the 56 categories have been computed. The expert-scale is introduced in order to avoid tautological outcomes. If this correlation is higher than 0.40 (this cut-off point is – amongst other things – based on the number of cases) then issues are characterised as being either left or right. Typical left issues are a negative attitude towards the military and favourable mentions of peace, democracy, nationalisation, social justice and labour groups. In sum, these issues are directed towards the enlargement of the public sector. Typical right-wing issues are favourable mentions of the military, governmental and administrative efficiency, free enterprise, economic incentives, economic orthodoxy, welfare state limitation, education limitation and law and order. These right issues focus on the private sector and favour a limitation of the public sector. The minimum score of the scale is -100, meaning that all emphases in the manifestos are on the right issues. The maximum score on the scale is 100, meaning that all the emphasis is put on the left issues. The final scale is computed by subtracting the sum of left issues from the sum of right issues.

The permissiveness-scale is operationalised by subtracting 'Traditional morality: positive' (per603) from 'Traditional morality: negative' (per604). Hence a positive score on this scale means 'permissive'. Figure 1 shows the development of policy positions and equilibria over time. These equilibria are calculated by weighting the policy positions of the five main parties on the two dimensions with the number of seats and the saliency attached to the two dimensions (based on Laver and Hunt, 1992). This equilibrium is near the ideal point of D66 which is at the same time the dimension-by-dimension median on the left-right scale. This figure suggests that 1994 is special indeed, because this equilibrium combines relatively rightist socio economic positions with permissive positions on the liberal-conservatism scale. The positions on the former dimension enable the cooperation

Table III. Composition of the left-right scale

Left emphases: Sum of %s for			Right emphases: Sum of %s for	
105	Anti-Military		104	Pro-Military
106	Peace		303	Government efficiency
202	Democracy	Minus	505	Anti-Social Services
413	Nationalisation		401	Free Enterprise
503	Social Justice		402	Economic Incentives
701	Pro-labor		414	Economic Orthodoxy
			605	Law and Order

Source: Pennings and Keman, 1994: 40.

of PvdA and VVD and those on the latter the exclusion of the CDA. Another remarkable finding is that in 1998, when the purple coalition was continued after new elections, the equilibrium has moved more to the left on the left-right dimension and to the conservative side of the conservatism-liberalism dimension (see: Kleinnijenhuis et al., 1998). Hence, the actual shared space in 1994 is larger than in 1998.

When this situation would have occurred in 1994, a formation of a purple cabinet would have been less likely. Such an analysis allows for a much more precise analysis of what actually happens as well as for testing general coalition theory (see Laver and Budge, 1992; Lijphart, 1999).

3.4. APPLICATION 4: PARTY SYSTEMS

The last example illustrates the use of party policy positions in order to analyse the functioning of party systems. A party system is a set of formal and informal rules that direct and influence the room to manoeuvre of parties (Keman, 1997: 85). Parties must not only compete with each other for office, but must also cooperate with each other in order to be able to accomplish policy goals. In sum, party differences are important features of party behaviour as well as of the problem-solving capacity of party systems. In order to understand the occurrence or absence of coalescence and cooperation, one should not only look at polarisation, fragmentation and sociocultural diversity, but also at those mechanisms which help to overcome conflicting outcomes of party behaviour in favour of cooperation. Parties, being rational actors and strategic players, will adapt their ideological position in such a way that their bargaining position within the spatial distribution of their party system is optimised. A special position in this respect is taken by the so-called pivot parties, being dominant players which occupy a policy position between the Left and Right of a party system, yet simultaneously have sufficient weight to influence the behaviour of other parties. Keman has shown that the existence and behaviour of parties in the centre space of a party system explain its degree of coalescence

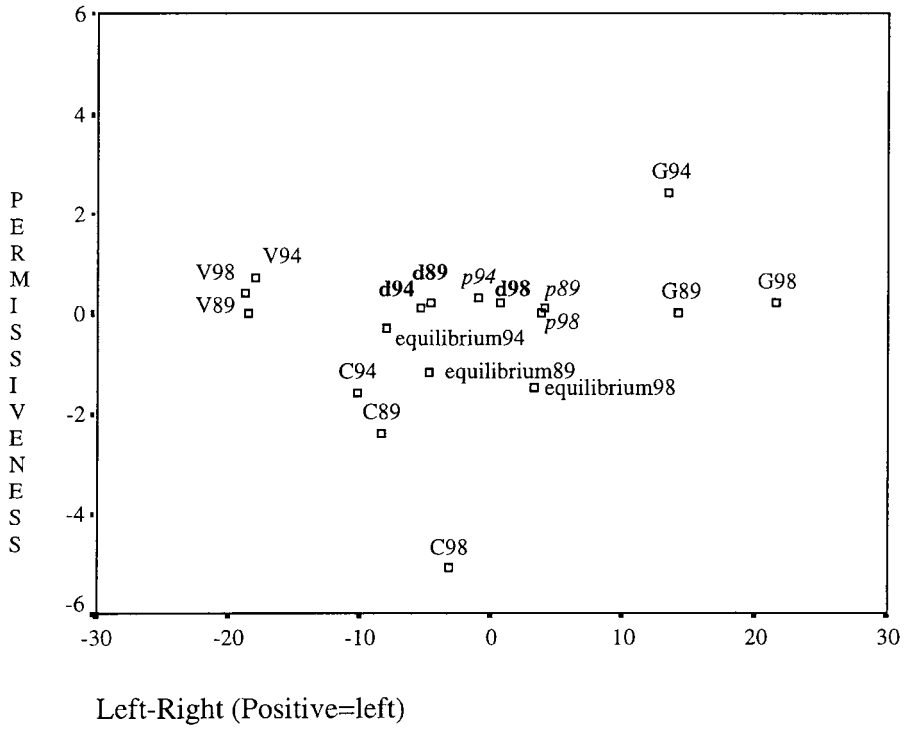

Figure 1. Two-dimensional representation of policy positions plus equilibria since 1989. *Source:* Kleinnijenhuis and Pennings, 2000: 67. *Legend:* The 1989-cabinet = P + C, 1994-cabinet = P + V + D, 1998-cabinet = P + V + D. *p* = Pvda, V = VVD, **d** = D66, C = CDA, G = Green Left. A high score on both dimensions means left c.q. permissive.

and cooperation in spite of high fragmentation or strong polarisation. Those parties that are in a position to play a central and dominant role appear to be crucial in the understanding of electoral developments and government composition. Table IV clearly shows that parties occupying the centre space of a party system are strongly represented in governments (taken from: Keman, 1997b: 104).

This section has given a brief summary of the ways in which estimates of party policy positions have been applied. However incomplete this overview may be, the examples show that these policy estimates enable a comparative analysis of voter-parties-governments linkages which are vital to the democratic process, be it cross-nationally, across time or both.

4. Shortcomings of Existing Estimation Techniques

The previous section has shown that the external reliability of the MRG-codings is high: the placement of parties makes sense and reveals patterns and variations which are recognised as valid by country experts. However, the *internal* validity of the MRG-codings is less convincing. As long as the research question is based

Table IV. Parties of the Centre in Government and having the Premiership (%)

	Centre Parties in Government			Having the Premiership		
	1945–70	1970–90	1945–70	1945–70	1970–90	1945–90
Austria	100	20	75	100	53	45
Belgium	59	32	41	58	83	70
Denmark	71	35	51	77	8	54
Finland	51	26	40	73	56	67
France	26	16	23	41	33	38
Germany	84	84	84	100	70	83
Ireland	64	0	35	100	0	50
Italy	48	96	74	100	91	96
The Netherlands	77	72	74	100	100	100
Norway	70	20	45	91	25	61
Sweden	21	20	21	0	33	14
Switzerland	27	0	14	26	0	57

Source: Keman, 1997b.

on broad divisions as Left versus Right, the validity problem does not seriously hamper the research. But if the research question becomes more specific, the coding scheme reveals significant shortcomings.

Obviously, the coding scheme has become outdated since it was developed in 1979. Important categories that have been left out or are not relevant now or are not identifiable as separate categories (like inflation, unemployment, feminism etc.). In addition, the existing data are scored *inter-subjectively* and may well lead to invalid results (but see, however: McDonald and Mendes, 1999; they demonstrate that the validity of the existing MRG-dataset as compared to expert surveys is quite robust). Yet, the fact remains that it is difficult to assess the directional weight given to the issues or the relative salience of each issue *comparatively*. For this reason it is important to maximise the flexibility of the raw data in order to be able to apply an alternative coding scheme *independently* by any group of researchers at any point in time.

Recently, a growing awareness of the shortcomings of the underlying coding scheme which is used to code the party manifestos can be noticed. Its strength is that it enables comparisons across time and space. Its weakness is that once the coding scheme was established, it cannot be changed anymore without jeopardising its ability to enable comparative research. Hence, the shortcomings of the MRG coding scheme, such as overlapping and missing categories, cannot be repaired without coding all manifestos all over again. But it would be impossible and unproductive to recode all manifestos manually, simply because once this would have been accomplished, the coding scheme would be outdated again and one would have to start all over again (and again).

Laver and Budge (1992) have recognised these problems with the coding scheme and proposed the solution of the so-called 20- dimensional policy space in which they merged the 56 categories into 20 categories. In this way the problem of overlap between categories was solved. But the merging of categories does not solve the problem of missing categories. It only provides a partial solution to one particular problem.

Others have presented an alternative for manifesto-research by means of expert opinions (Castles and Mair, 1984; Laver and Hunt, 1992; Huber and Inglehart, 1995). The main problem with this method of estimating policy positions is that it is unable to provide a reliable time series for subsequent election years. In addition, the estimated party positions on the basis of manifestos and expert surveys are fundamentally different. The expert estimations predict far more extreme policy positions than the MRG-approach. For this reason both estimation techniques are fundamentally different and cannot be exchanged (Pennings, Keman and Kleinnijenhuis, 1999).

The unborn solution to some of the problems with the MRG-coding scheme would be the computerised content analysis on digitalised party manifestos. This would open up a new universe of infinite possibilities for recodings and reanalyses. The extended consequences from full computerisation of textual analysis are mind boggling. But at the present, these possibilities are merely potentials as the computerised techniques are still underdeveloped (Alexa and Zuell, 2000). But it is obvious that significant improvements will be made in the coming years. The first results of computerised content analysis confirm the potential of automated textual analysis (Laver, 2001). But the same results also make us realise that a huge amount of work still has to be done (Kleinnijenhuis and Pennings, 2000). Computer codings will ultimately be required to go beyond the one-position saliency codes typically used by the MRG, by adding the directional and contextual meaning of policy positions.

5. Towards a New Methodology

The computerised estimation of party policy positions is a demanding task which is being performed in several subsequent steps.[1] These steps involve:

- making the existing election manifestos of 20 countries electronically accessible by means of scanning and digitalising techniques;
- collecting party manifestos of a number of political parties not yet included in the present data-set for the period 1960-present;
- translating the digitalised information by means of translation software and – if not available – by "hand" into the present academic *lingua franca*: English;
- applying newly developed software in order to (re)code and (re)analyse the data in a truly comparable format.

Given the most likely demand for use we have developed the following criteria for inclusion of party documents (i.e., election platforms):

- manifestos having appeared since 1960 in the following (liberal) democracies: Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the USA (N = 20)
- manifestos of those parties that have been in government during the above period and those that are represented in the parliaments main Chamber for two consecutive electoral periods and having at least 5% of the vote (or of the seats if it concerns a plurality or majority electoral system).

Although these criteria imply that the time period is more limited than the original data collection (which is 1945-present for 16 of the countries mentioned) it also means that the range of parties is larger than in the original MRG-project (which only included parties in government). The rationale to limit the time period is partly due to pragmatic reasons (such as the relevant time-span of the collection that appears meaningful for contemporary analysis to most users and the feasibility in terms of labour time and availability of electoral platforms). Yet, the primary reason is that only since the early 1960s electoral manifestos are covering most of the policy domains of the MRG coding scheme. Before 1960 most manifestos were small documents with relatively few statements on a small number of topics (this is confirmed by the content analysis in the next section). Hence we hold the view that since 1960 the manifestos have become *genuinely comparable* – in addition as to their *longitudinal* character within one polity.

The improvement and extension of the coding of party manifestos has a significant relevance for both the debate on and scientific analysis of party behaviour within modern democracies. It has merits for the analysis of the changing ideological profiles of political parties (i.e., left-right, post-materialism etc.), the study of party behaviour in relation to government formation and the positioning of parties vis-á-vis the media and voters. This research will be strongly supported and improved by the availability of electronic party manifestos because of the flexibility of these documents. Any researcher can adapt the coding scheme so that it fits into any research question on the basis of the data and the manual-codebook. Furthermore, the extension to other documents like parliamentary proposals, government declarations, green papers etc. would make the analysis of democracy even more wider and comprehensive.

6. Examples of Computerised Content Analysis

This section discusses three applications of computerised content analysis in order to demonstrate the present state of affairs of this new methodology.

6.1. APPLICATION 1: POSITIONAL WORD COUNTS (LAVER AND GARRY, 2000)

Laver and Garry have defined a dictionary in which frequently used words represent pro-, neutral and con-positions for economic policy, social values and political

reform. This was done by using a combination of a priori and empirical criteria. Before selecting any specific words for the dictionary, they looked at all words used in the 1992 UK-manifestos. They compare the Labour and Conservative manifestos in terms of the relative frequency of all possible words. These words were then allocated to the dictionary where each word was identified as either a 'Labour' or a 'Conservative' word. Thus, the word 'taxes' was used 22 times in the 1992 Conservative manifesto, and only once in the 1992 Labour manifestos. They thus allocated it in the dictionary to the con-state intervention category in the coding scheme. Given this procedure, the manifestos will appear very different from each other precisely because they have been used as part of the process of defining the dictionary. Only words were allocated to a coding category which had a clear substantive meaning in terms of this category and only words were allocated which were used by one party much more than the other. Policy positions are then estimated by means of this equation (P = Party; C = policy concern):

$$P_{Ctot} = P_{Cpro} + P_{Cneut} + P_{Ccon}$$

The original MRG approach used P_{Ctot} as an indicator of the emphasis being given to a particular policy concern. Laver and Garry seek to estimate the position of the manifesto as some function of the balance of pro and con mentions of a policy concern. The Pearson correlation between alternative estimates of economic left-right scale positions (i.e, computer codings, MRG codings, expert surveys) appear to be high (>0.845). But, the placement of individual parties do differ significantly per estimate.

The main limitation of the approach of Laver and Garry is that it is not well equipped to apply the much richer MRG coding scheme to electronic documents. Words are allocated to the dictionary irrespective the context in which they were used. It is also questionable whether or not Laver and Garry's dictionary can be applied to other documents than the one from which it was extracted. These are serious limitations which will hamper a breakthrough in the field of computer-coded content analysis. The following examples are meant to present some major improvements.

6.2. APPLICATION 2: MRG-COMPATIBLE CODING (KLEINNIJENHUIS AND PENNINGS, 2000)

Kleinnijenhuis and Pennings have developed a method in which the codings are kept completely '*MRG-compatible*' by coding the electronic documents into the same categories as in the MRG- project. The reason is that we wish to certify the reliability of our computer codings. The only way to accomplish that is to compare them with existing codings. This is a self-imposed restriction: the automatic coding with key words also allows for codings of texts on the basis of alternative coding schemes and methods.

There are several advanced ways to code electronic documents (see for an overview: Roberts, 2000; Popping, 2000). Which method one should choose fully depends on the research goals. The way we seek to code electronic documents is driven by the following two goals:

1 The way of coding must be *efficient and effective*, i.e., the method must enable the automatic coding of hundreds of manifestos within a few hours as well as producing data that can be used for further analysis.
2 The way of coding must be *multi-lingual applicable* to all party manifestos in the OECD, i.e., it must cover all the documents included in the MRG-project which are published in 12 languages.

All the choices which are described below are driven by these two goals. With a different set of goals, we would have made totally different methodological decisions.

Since manual relational content analysis is as time-consuming as manual MRG-coding, and automatic relational content analysis is still one bridge too far, an alternative thematic content analysis based on the keyword-approach was used. The question was whether the categories which were recognised by MRG-coders could be recognised also by probabilistic calculations on the basis of keywords. Thus, the original MRG-codes for a set of selected party manifestos were used to calibrate the probabilistic appropriateness of keywords. The main objective that is often made against this type of coding is that the words are counted without their context so that the contents of manifestos are not adequately captured. This objection would normally hold for electronic texts in general, but not for the party manifesto documents. The reason is that these documents are already coded manually. This gives us an opportunity to preserve the ambiguity of words. Words which can be used in the context of different MRG-categories do not uniquely point towards one category. We have done this following these steps:

1 The original MRG-codes (101 through 706) are assigned by human coders to all sentences in a set of party programmes, labelled as the "calibrating set".
2 To each word (stem) occurring in the calibrating set 56 probabilities were assigned, depending on the relative frequency of assignments of (quasi)sentences with the word (stem) included to the 56 MRG-categories. This is called a *probabilistic dictionary*: to what degree a given word is an indicator of an MRG-category depends on the empirical probability of being linked to the 56 MRG-categories in the calibrating set, thereby circumventing arbitrary "manual" binary decisions whether or not a word(stem) is an indicator of a specific category.
3 A manual refinement of the probabilistic dictionary was applied. Words that occurred less than five times were removed from the dictionary (words that occur less than five times in the calibrating set will have zero-probabilities for at least $56 - 5 = 51$ categories, but these zero probabilities can result from a "too small" calibration set). Words that occurred extremely often but did not discriminate between the categories were also removed. For example, function

words like 'the' were excluded because their distribution over the categories is arbitrary. A probabilistic dictionary with 1000 word stems with a political meaning (e.g., 'socia...', 'tax...', 'democra...') were retained.

4 The probabilistic dictionary was applied to Dutch election manifestos (1946–1998), which will be labelled the "application set". The absolute frequency of a specific MRG-category in a party program from the "application set" can be computed as the sum of the frequencies of the word stems from the calibrating set in the application set, weighted by their respective probabilities of pointing towards the MRG-category under review. Discriminant analysis (e.g., Namenwirth et al., 1978) or any other advanced classification technique could be used in stead to take care of the multivariate togetherness of words.

The steps 1 to 4 can be performed by using an elementary keyword count program like Textpack (Mohler and Zuell, 1998) and a statistical package like SPSS. The design of the dictionary is of course crucial. The approach is limited to the Dutch documents for matters of convenience. The potential of this approach is that it can be applied to any language. Another way to proceed is to apply this method to documents which are stated or translated into English only, so that one and the same dictionary can be applied to all cases. The keyword approach facilitates the translation because words can be translated more efficient than sentences.

This is not to say that the keyword approach is without problems. At the present stage there are probably as many problems with automatic coding with keywords as with the manual coding of sentences. However, its potential makes it worthwhile to proceed with automatic coding and not to worry about the actual results which, as we will show now, can be problematic, but not hopeless because there are ways to improve its use for substantial analysis.

Figures 2 and 3 present the party movements in the Netherlands on the basis of the computerised word count approach and the manual codings with the help of the MRG-coding scheme. The coding with the help of key words does not work with small documents, say less than ten pages. This conclusion is based on the volatile movements on the left-right scale before 1967 which do not look very convincing (e.g., the CDA is most to the left in 1959). For this reason, the curves in the period before 1967 should be disregarded. This finding strengthens our decision to include only documents after 1960.

The comparison between the MRG-scales and the 'word count scales' brings about similarities and differences. The most important result is the broad similarity in the positioning of the five established parties. Both the MRG-scale and the scale based on automatic coding do come up with the same rank order of parties. This rank order is also confirmed by most expert scales (see: Laver and Schofield, 1990 for an overview). The outcome indicates that automatic coding can certainly lead to reliable (externally confirmed) results. There are, however, also some striking differences between the two types of coding:

1 In the early period D66, is placed much more to the right on automated scale.

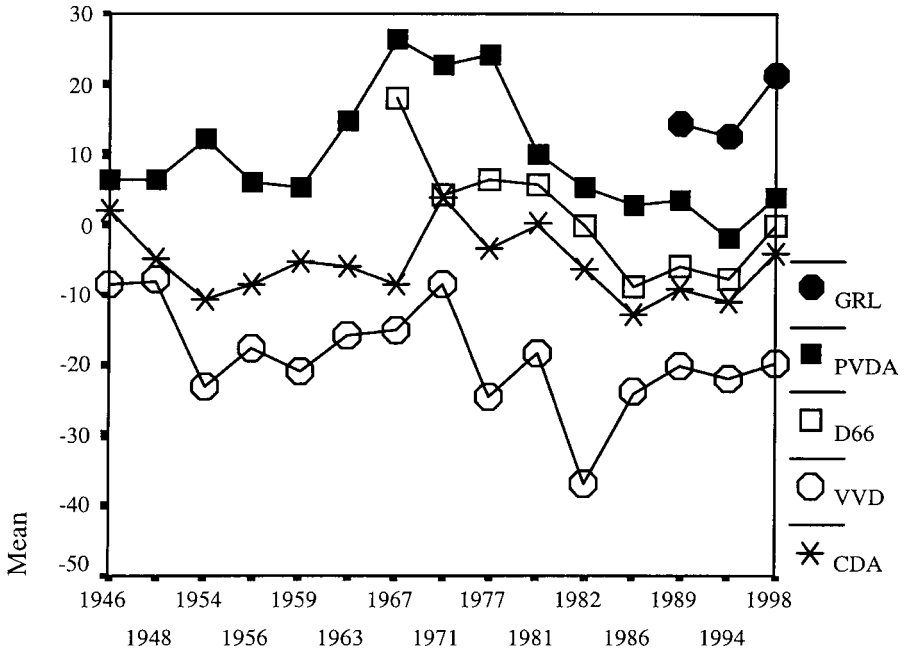

Figure 2. Left-right movements based on the manual codings with MRG coding scheme. *Source:* Kleinnijenhuis and Pennings, 2000: 62. *Legend:* PvdA = social democratic, VVD = conservative liberal, CDA = christian democratic, D66 = social liberal, GRL = ecologist and socialist.

2 In 1998 all parties, except the CDA, would move to the right, whereas the MRG-scales suggest that all parties move to the left.

These discrepancies between the party movements on the basis of the hand-coded MRG-data, on the one hand, and on the basis of computerised coding, on the other, is puzzling and asks for some elaboration. The external validity of the manual codings seems better than the automated results because of their consistency with media and voter perceptions of party positions which have resulted from the detailed research on media and voters during the Dutch elections in 1994 and 1998 (See: Kleinnijenhuis and De Ridder, 1998; Kleinnijenhuis and Pennings, 2000). On the basis of these findings, an overall tendency towards the left in 1998 is more plausible than a tendency towards the right. Yet, we do claim that this assumed lack of reliability of computer-aided content analysis by means of word count is not a final and irreversible drawback that would warrant us to abandon this approach to coding manifestos. We have several good reasons to take this position.

First of all, the method is presented in its most simple format. It can be made more sensitive to the meaning of words within the context of sentences. Secondly, there is a continuous and even increased effort to produce more advanced software to analyse words within their context and sentences as a whole. Hence, most shortcomings will sooner or later be solved. Third, even within the restricted pos-

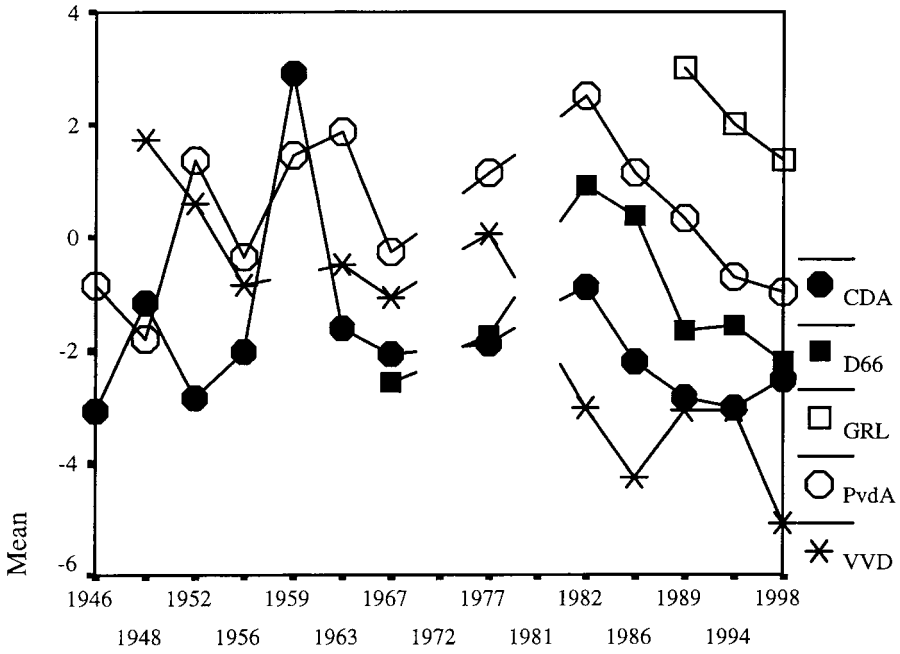

Figure 3. Left-right movements based on the automated codings with the MRG coding scheme. *Source:* Kleinnijenhuis and Pennings, 2000: 65. *Legend:* PvdA = social democratic, VVD = conservative liberal, CDA = christian democratic, D66 = social liberal, GRL = ecologist and socialist.

sibilities of word count, there are unique possibilities for a fruitful application of this method on texts. Word count, for example, is suited to match different codebooks that stem from different data sets. It is possible, for example, to make a fit between the priorities of voters (based on the election studies) and the priorities of parties (based on party manifestos) and the priorities of governments (based of government declarations). Before, this match between different codebooks was problematic because the coding categories are different. With the help of word count it is much easier to merge these categories. Finally, computerised codings are not sensitive to biases and human mistakes like human coders and experts are. This comparative advantage makes it worthwhile to develop computerised content analysis techniques, even if the present results are not fully satisfactory.

These reasons make us to believe that the keyword approach to computer aided analysis of digitalised party manifestos is promising, although the presented results do not seem fully reliable (although they are certainly more valid). Additionally, digitalisation gives us numerous advantages (apart from the coding method) as it enables machine translation, quick transmission of files and many possibilities for recoding.

6.3. APPLICATION 3: THE NATURAL SENTENCES APPROACH (RAY, 1999; FAN, 1994)

An improvement of computerised content analysis of party manifestos would be the coding of sentences in stead of the counting of words (Fan, 1994). Such a coding technique would enable a direct comparison between the manual coding and the computer codings which is important in order to validate the latter. In addition, a natural sentences approach to the computer coding of party manifestos can be used, not just to compare codings, but also to improve codings (Ray, 1999). For example, directional tags could be added in order to determine whether the claim of the saliency theory that the overwhelming majority of tags would be positive, is confirmed.

The procedure to code sentences automatically with the help of the MRG-coding scheme is still under development. Until now the following steps have been developed and put into practice:

1 a dictionary has been constructed containing 1500 key words (including stem words) which describe the 56 coding categories of the original MRG-coding scheme;

2 all words in sentences which match with the key words in the dictionary are replaced by the MRG-code with the help of TEXTPACK.

3 SPSS weights all occurrences of the MRG-codes by multiplying them with their frequency in the manually coded text. This step is necessary because when a sentence holds for example two codes, we cannot we decide which code describes this sentence best unless we introduce a third contextual variable which indicates the plausibility of both codes.

4 Finally, SPSS assigns one code for each sentence which is then compared with the manual code.

The following example illustrates this procedure based on the British Liberal party manifesto of 1987 (Witschge, 2000):

000001	Government must enable society @606 to take the longer view, setting the right balance @606 between present consumption @408 and future investment @408 and ensuring that economic development @408 is sustainable @501 and environmentally @501 responsible.
000002	The values must also guide foreign policy @107, where the defence @104 of the nation goes hand-in-hand with the promotion of peace @106 and fairness @503 in a world @107 marked by severe inequality @503 and injustice @503.

The first sentence is coded as ‘408’ and the second sentence as ‘104’. This coding results from the following weighting procedure:

Sentence	Category	Overall percentage in manual codings	Frequency of code in sentence	Multiplification
1	606	1,05	2	2,10
	408	5,83	3	17,5
	501	3,53	2	7,06
2	107	1,43	2	2,86
	104	3,82	1	3,82
	106	1,34	1	1,34
	503	0,10	3	0,30

On the basis of these distributions it would probably be better to divide both sentences into two quasi-sentences with the codes 408 and 501 for sentence 1 and codes 107 and 104 for sentence 2. Although many improvements are possible and necessary, the simple fact that this procedure is fully automated is already a major advancement. The preliminary results are promising. In case of the 1992 manifestos of the British Conservatives, the correlation between the computer code and the manual code is 0.74. These steps are, of course, not the end of the analysis. Some possible advancements are:

1 A comparison of the manual codes and the computer codes enables improvements of the dictionary because it gives an indication of the degree of reliability of the computer codings (Bara, Budge and Tanenbaum, 1999).

2 By adding codes to sentences for positive and negative tags (e.g.: not; in favour of; opposed to, advocate, support, etc.) it is possible to assign valence to sentences (Fan, 1994; Ray, 1999);
Example:
"The Alliance advocates further development of the EC" (1983 Liberal/SDP Alliance platform)"
A multiplicative valence algorithm would code this sentence as positive towards the EC:
+1 (advocates) * +1 (development) = +1.

3 By lagging the coding category, it is possible to construct a context of sentences (resembling paragraphs: sentences referring to the same topic) which can be used to improve the codings. If a sentence gives us several clues what it is about, the paragraph of which it is part can give us information on its predominant content.

4 By letting the meaning of a category depend on the other words in the sentence.[2]

5 By linking the datafiles to linguistic databases (i.e., Celex, Wordnet, EuroWordNet) in order to gather very specific information on the meaning of words within semantic contexts.

Taken together, these procedures have the potential to produce a fully tested data set which is reliable and suitable for multi-purpose utilisation.

7. Perspectives

Election manifestos are important and valuable sources of material in themselves. They provide cohesive and regular documentation of parties' "best thinking" on how they perceive their priorities and strategy in government in the short to medium term. This data will also represent a huge resource of material over time which provides information on the development of mass parties, policy, ideology, strategic approaches to problem-solving, participation etc. In short, manifestos are crucial for the development of democracy and its procedural and material performance (Klingemann et al., 1994; Keman, 1997).

Until the *Manifesto Research Group* of the *European Consortium for Political Research* began a comparative study in the late 1970s, little systematic analysis of election platforms had been carried out. This project enabled the documents to be coded, quantified and archived according to a coding scheme established by twenty collaborators who analysed all established democracies that belong to the so-called OECD-world.

Among other things the coding scheme has facilitated identification of a valid left-right scale, the study of the dynamics of coalition building, how parties respond to the public, whether governments carry out their election pledges and how this can be related to priorities in public expenditure. Subsequently, the scheme has been used to study political parties in the emerging democracies of Central and Eastern Europe. This latter extension is being done at the Wissenschaftszentrum Berlin (Klingemann and Hofferbert, 1999).

The development of automated content analysis techniques will enable new flexible ways of coding documents. The seminal MRG-project produced a set of manually coded data which can be used to elaborate and test any automated procedure of content analysis. When a valid method of automated content analysis is developed, content analysis will become much more useful not only for the study of political parties, but also for the study of all types of documents, and hence for social science in general. In order to achieve this goal within a comparative framework, hundreds of manifestos in more than ten languages have to be scanned, translated into English, coded and validated. The coding of texts is no longer a static and irreversible act which cannot be undone. In stead, it has evolved into a flexible way to analyse the dynamics of modern democratic politics.

Notes

[1] This project is enabled by an investment subsidy of the Dutch Organisation of Scientific Research (NWO) (Grant 480-42-005).

[2] For example, with the following SPSS-command:

```
if (index(sentence, '504') > 0) and (index(sentence, 'cut') > 0) or (index(sentence, 'reduce') >
0) per = 505.
```

the code 504 (welfare state spending) is changed into 505 (welfare state limitation) in those instances where the code 504 occurs in connection with the words 'cut' or 'reduce'.

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